

REMARKS/ARGUMENTS

In response to the above-identified Office Action, Claims 1-20 remain pending in the present application.

For the reasons set forth more fully below, Applicant respectfully submits that the present claims are allowable. Consequently, reconsideration, allowance and passage to issue of the present application are respectfully requested.

With regard to the drawings, Applicant has included herewith formal versions of the drawings, as requested by the Examiner.

With regard to the claims, Applicant respectfully disagrees with the Examiner's assertions that claims 1-5, 8-12, and 15-18 are unpatentable under 35 U.S.C. 103(a) over IBM Technical Disclosure Bulletin, Vol. 41, No. 1, January 1998 ("IBM") in view of Garrison and that claims 6, 7, 13, 14, 19 and 20 are unpatentable under 35 U.S.C. 103(a) over IBM in view of Garrison and further in view of Riggins. With more particular regard to independent claims 1, 8, and 15, the Examiner states:

IBM teaches a method for integrating encryption functionality into a database system, the method comprising: providing at least two functions to support data encryption in a database system (p 710). IBM teaches the use of encryption functions within a database but not explicitly within a structured query language, hereinafter SQL. Garrison teaches that structured query languages requests [sic] data from databases (col. 8, lines 10-12). Garrison also teaches that the data can be encrypted and decrypted when communicating with the database (col. 2, lines 42-51). It would be advantageous to use SQL queries to make requests to a database because SQL is well known in the art. Garrison's teachings are an obvious extension to IBM system [sic] in which encryption functions are used to protect data. In view of this, it would have been obvious ... to employ the teaching of Garrison within the system of IBM because it would allow SQL commands to be implemented to interact with the database. One skilled in the art would have been motivated to generate the claimed invention with a reasonable expectation of success.

Applicant respectfully disagrees with the Examiner's position.

In the present invention, aspects for integrating encryption functionality into a database system are provided. As recited in varying form in independent claims 1, 8, and 15, the present invention includes providing at least two functions to support data encryption in a database system. The at least two functions are utilized within structured query language statements. Through the aspects of the present invention, users have better assurance that data private to a database application remains inaccessible to others, such as database administrators. Further, the provision of the encryption functionality of the present invention in an integrated manner with SQL creates a substantially unlimited range of database environments within which the present invention may be used. Applicant respectfully submits that cited art fails to teach, show, or suggest the recited invention.

The Examiner asserts that IBM teaches the use of encryption functions within a database system. Applicant fails to see any teaching or suggestion of the use of encryption functions within a database system. Rather, IBM teaches that a database can be "used to describe the cryptographic support algorithm that is loaded as a specific kernel extension." (p. 709) Thus, the database model is applied to cryptographic algorithms, including encryption and authentication algorithms. However, there is nothing from IBM's use of a database model for cryptographic algorithms that teaches or suggests the provision of at least two encryption functions to support data encryption in a database system, as recited by the Applicant. The database merely stores modules that describe properties of cryptographic code used in networking software. While such code may, perhaps, provide security for use in the networking software, there is nothing to teach or suggest that the storing of the properties of such code in a database, as taught by IBM,

supports data encryption in the database or can be utilized in any manner within the database as encryption functionality for the database to protect data.

Thus, Applicant respectfully submits that IBM wholly fails to teach, show, or suggest the integration of encryption functionality into a database system, including the provision of at least two functions to support data encryption in a database system, as recited in Applicant's independent claims 1, 8, and 15. Further, without teaching or suggesting the provision of at least two functions to support data encryption in a database system, there can be nothing to teach or suggest the utilization of the at least two functions, including the utilization of the at least two functions within structured query language statements. While the Examiner points to Garrison for teaching that structured query languages request data from a database, the mere teaching of forming queries using a structured query language does not provide any criticality of teaching for combination with IBM that overcomes the deficiency of IBM regarding the provision of at least two functions to support data encryption in a database system. Further, Garrison's description of encrypting and decrypting data when communicating with a database also fails to teach or suggest anything to overcome the deficiency of IBM. In fact, the teaching of Garrison demonstrates that the database of Garrison lacks any encryption functionality, since the result of a query returned to the requesting server has to be encrypted by the server itself before being passed to a client (see cited col. 2, lines 42-51).

Thus, Applicant respectfully submits that the integration of encryption functionality into a database system as recited in independent claims 1, 8, and 15 is not taught, shown, or suggested by the cited art. In addition, dependent claims 2-7, 9-14, and 16-20 include the features of one of the independent claims while adding further features. Accordingly, these claims also are respectfully submitted as allowable for at least those reasons stated hereinabove. With regard to

the Riggins reference cited with respect to dependent claims 6, 7, 13, 14, 19, and 20, Applicant respectfully submits that Riggins was merely cited for teaching the general ability to have data optionally encrypted with a password hint. However, even if the description of the use of a password hint from Riggins were combined with IBM and Garrison, there is still nothing in the combination that overcomes the aforementioned deficiencies of IBM and/or Garrison in teaching or suggesting the recited invention.

In view of the foregoing, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. 103(a).


Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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Date



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